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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,392	11/25/2003	Il Rog Heo	K-0569	4273
34610	7590	05/01/2006	EXAMINER	
FLESHNER & KIM, LLP			TAI, CYRIL	
P.O. BOX 221200				
CHANTILLY, VA 20153			ART UNIT	PAPER NUMBER

1723

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/720,392

Applicant(s)

HEO, IL ROG

Examiner

Cyril Tai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. Republic of Korea P2002-75030, filed on 11/28/2002.
2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "113" has been used to designate both "outlet" and "partition wall". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoo (KR Pub. No. 1994-0006388). Please refer to the enlarged Figures below in this Office Action.

Regarding claim 1, Yoo discloses a filter for a washing machine (see abstract, Figures), comprising: a cap fitted to a filter case (10) having an opening (7) via which water passes; a shaft (9) (cylindrical portion) extending from a bottom of the cap; and an extension extending from an end of the shaft (funnel shaped portion next to shaft), the extension disposed to confront the opening to filter particles included in the water, the extension having a protrusion (ring like portion next to extension) protruding from one side opposite to the cap.

Regarding claim 2, Yoo discloses the filter as claimed in claim 1, wherein a circumferential cross-section of the protrusion is a closed curve (see Figures).

Regarding claim 3, Yoo discloses the filter as claimed in claim 1, wherein the protrusion has a ring type circumferential cross-section (see Figures).

Regarding claim 4, Yoo discloses the filter as claimed in claim 1, wherein the extension has a funnel figure (see Figures).

Regarding claim 5, Yoo discloses the filter as claimed in claim 1, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening (see Figures).

Regarding claim 6, Yoo discloses a filter assembly for a washing machine, comprising: a filter case comprising: inlet (6) and outlet (7) on a circumference; and an opening (conical portion before outlet) inside to make the inlet and outlet communicate with each other; and a filter loaded in the filter case, the filter comprising (see Figures): a cap fitted to the filter case; a shaft extending from a bottom of the cap (cylindrical portion); and an extension extending from an end of the shaft (funnel like portion next to shaft), the extension disposed to confront the opening to filter particles in water, the extension having a protrusion (ring like portion next to extension) protruding from one side opposite to the cap.

Regarding claim 7, Yoo discloses the filter assembly as claimed in claim 6, wherein a circumferential cross-section of the protrusion is a closed curve (see Figures).

Regarding claim 8, Yoo discloses the filter assembly as claimed in claim 6, wherein the protrusion has a ring type circumferential cross-section (see Figures).

Regarding claim 9, Yoo discloses the filter assembly as claimed in claim 6, wherein the extension has a funnel figure (see Figures).

Regarding claim 10, Yoo discloses the filter assembly as claimed in claim 6, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening (see Figures).

Regarding claim 11, Yoo discloses the filter assembly as claimed in claim 6, wherein the filter case is cylindrical (see Figures).

Regarding claim 12, Yoo discloses the filter assembly as claimed in claim 6, wherein the inlet is provided to the circumference of the filter case in a tangential direction (see Figures).

FIGURE A. Enlargement of Figure 3A of Yoo.

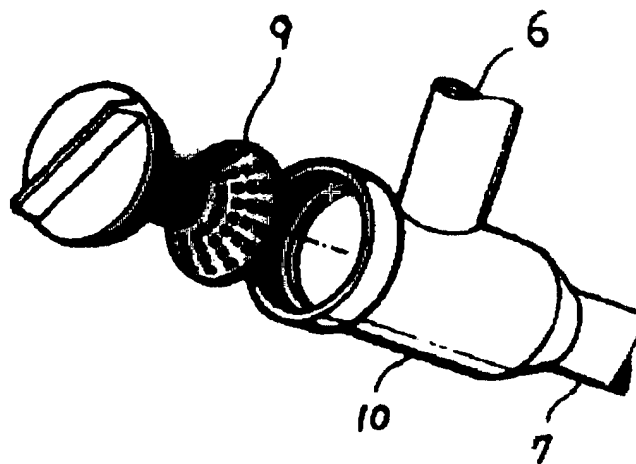
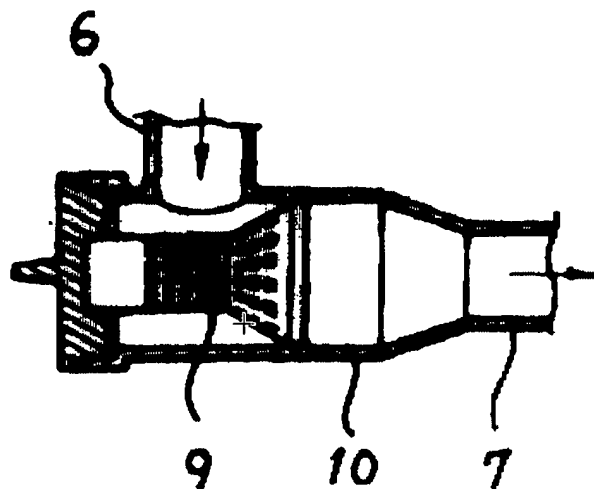


FIGURE B. Enlargement of Figure 3B of Yoo.



6. Claims 6 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Beier et al (DE 39 22 629 A1). Please refer to the enlarged Figures C and D below in this Office Action, and attached English language machine translation for clarification on reference numbers.

Regarding claim 6, Beier et al discloses a filter assembly for a washing machine, comprising: a filter case (1) comprising: inlet (4) and outlet (5) on a circumference; and an opening (9) inside to make the inlet and outlet communicate with each other; and a filter loaded in the filter case, the filter comprising (see Figures): a cap (20) fitted to the filter case; a shaft (11) extending from a bottom of the cap (see Figures); and an extension (8) extending from an end of the shaft, the extension disposed to confront the opening to filter particles in water, the extension having a protrusion (see Figure D) protruding from one side opposite to the cap.

Regarding claim 13, Beier et al discloses the filter assembly of claim 6, wherein the filter case comprises: a tube having the inlet and outlet on the circumference (see Figures); a partition wall (see Figure C) provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and the opening perforating the partition wall (see Figure C).

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Figure C. Enlargement of Fig. 1 of Beier et al.

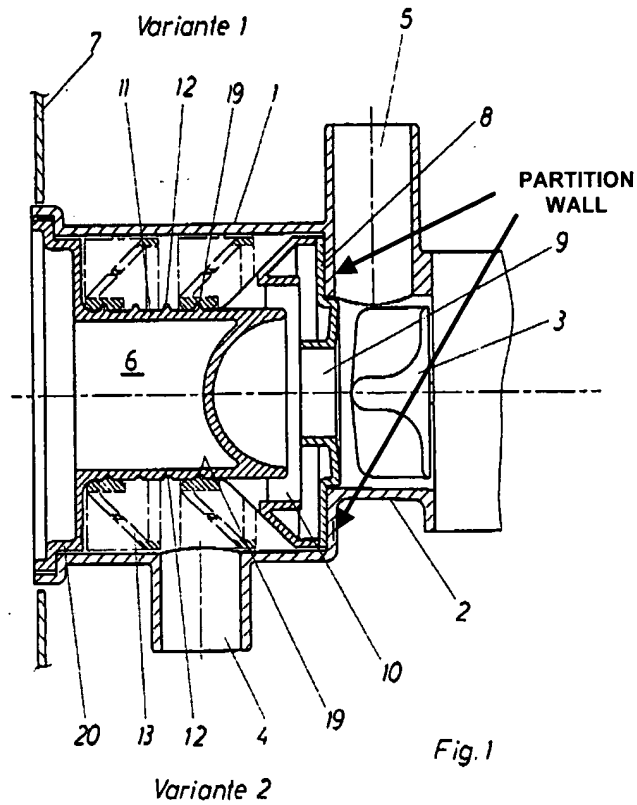
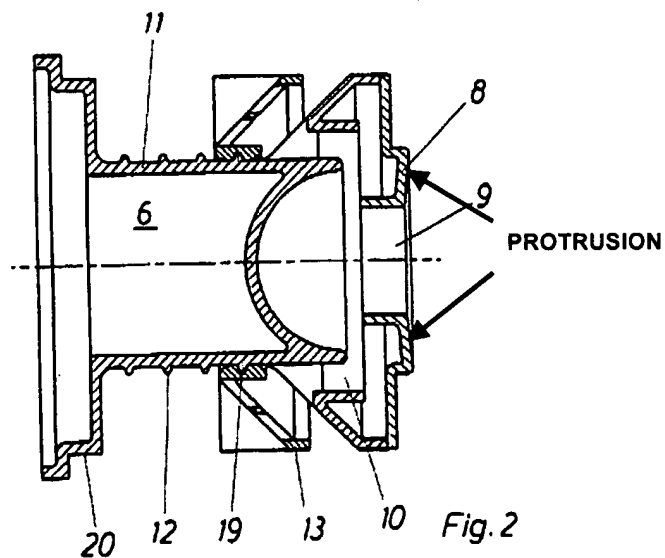


Figure D. Enlargement of Fig. 2 of Beier et al.





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***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo (KR Pub. No. 1994-0006388) in view of Lee (US 6,167,733). Please refer to the enlarged Figures A and B above in this Office Action.

Regarding claim 14, Yoo discloses a washing machine comprising: a cabinet (1); a drum (27); and a filter assembly provided in the cabinet, the filter assembly comprising: a filter case comprising: inlet (6) and outlet (7) on a circumference; and an opening (conical portion before outlet) inside to make the inlet and outlet communicate with each other; and a filter loaded in the filter case, the filter comprising (see Figures): a cap fitted to the filter case; a shaft extending from a bottom of the cap (cylindrical portion); and an extension extending from an end of the shaft (funnel like portion next to

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shaft), the extension disposed to confront the opening to filter particles in water, the extension having a protrusion (ring like portion next to extension) protruding from one side opposite to the cap. Yoo differs from claim 14 in that it fails to teach a washing machine comprising: a cabinet; a tub provided in a cabinet; a drum rotatably installed in the tub and a filter assembly provided in the cabinet to filter water discharged from the outer tub.

Lee teaches washing machines that have a cabinet (body), a tub provided in a cabinet, a drum rotatably installed in the tub and a filter assembly provided in the cabinet to filter water discharged from the outer tub (col. 1, lines 24-30 of Lee). Yoo and Lee are analogous art in that both teach filters for washing machines.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention in view of the teachings of Lee combine the filter of Yoo and the washing machine of Lee in order to remove impurities contained in the liquid discharged from the tub (col. 1, 54-56 lines of Lee).

Regarding claim 15, Yoo discloses the filter assembly, wherein a circumferential cross-section of the protrusion is a closed curve (see Figures).

Regarding claim 16, Yoo discloses the filter assembly, wherein the protrusion has a ring type circumferential cross-section (see Figures). See rejection for claim 14.

Regarding claim 17, Yoo discloses the filter assembly, wherein the extension has a funnel figure (see Figures).

Regarding claim 18, Yoo discloses the filter assembly, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening (see Figures).

Regarding claim 19, Yoo discloses the filter assembly, wherein the filter case is cylindrical (see Figures).

Regarding claim 20, Yoo discloses the filter assembly, wherein the inlet is provided to the circumference of the filter case in a tangential direction (see Figures).

10. Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beier et al (DE 39 22 629 A1) in view of Lee (US 6,167,733). Please refer to the enlarged Figures C and D above in this Office Action, and attached English language machine translation for clarification on reference numbers.

Regarding claim 14, Beier et al discloses a filter assembly comprising a filter case (1) comprising: inlet (4) and outlet (5) on a circumference; and an opening (9) inside to make the inlet and outlet communicate with each other; and a filter loaded in the filter case, the filter comprising (see Figures): a cap (20) fitted to the filter case; a shaft (11) extending from a bottom of the cap (see Figures); and an extension (8) extending from an end of the shaft, the extension disposed to confront the opening to filter particles in water, the extension having a protrusion (see Figure D) protruding from one side opposite to the cap. Beier et al differs from claim 14 in that it fails to teach a washing machine comprising: a cabinet; a tub provided in a cabinet; a drum rotatably installed in the tub and a filter assembly provided in the cabinet to filter water discharged from the outer tub.

Lee teaches washing machines that have a cabinet (body), a tub provided in a cabinet, a drum rotatably installed in the tub and a filter assembly provided in the cabinet to filter water discharged from the outer tub (col. 1, lines 24-30 of Lee). Beier et al and Lee are analogous art in that both teach filters for washing machines.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention in view of the teachings of Lee combine the filter assembly of Beier et al and the washing machine of Lee in order to remove impurities contained in the liquid discharged from the tub (col. 1, 54-56 lines of Lee).

Regarding claim 21, Beier et al discloses the filter assembly, wherein the filter case comprises: a tube having the inlet and outlet on the circumference (see Figures); a partition wall (see Figure C) provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and the opening perforating the partition wall (see Figure C).

### ***Conclusion***


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cyril Tai whose telephone number is (571) 272-1495. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cyril Tai  
Examiner  
Art Unit 1723

  
JOHN S. KIM  
PRIMARY EXAMINER

CT  
4/13/2006